

Lab Quiz 6

Started: Oct 7 at 9am

Quiz Instructions

Instructions:

This quiz covers important points from **Lab 6 - Osmosis**. There are 5 questions, each worth one point. This quiz is not timed, however you only have one attempt. You can open and close this quiz without losing progress. However, once you hit "Submit", your answers will be submitted and your attempt is used up. Here's [how to resume a quiz you already started taking. \(https://community.canvaslms.com/t5/Student-Guide/How-do-I-resume-a-quiz-that-I-already-started-taking/ta-p/452\)](https://community.canvaslms.com/t5/Student-Guide/How-do-I-resume-a-quiz-that-I-already-started-taking/ta-p/452)

Question 1

1 pts

What is the key difference between osmosis and diffusion?

- ☐ Diffusion is when molecules move from an area of high concentration to an area of low concentration, where as osmosis is when particles move from an area of low concentration to an area of high concentration.

- ☒ Diffusion is when molecules move from an area of high concentration to an area of low concentration, where as osmosis is the movement of solvent from an area of high concentration to an area of low concentration across a semipermeable membrane

- ☐ Both move from an area of high concentration to an area of low concentration, and diffusion particles must move across a semipermeable barrier.

- ☐ Both move from an area of low concentration to an area of high concentration, and osmosis particles must move across a semipermeable barrier.

Question 2

1 pts

An animal SimCell has a concentration of 5 units of solute per 1 unit of solvent. This animal SimCell is then put into a solution that has a

concentration of 2 units of solute per 1 unit of solvent. In this situation the solution is said to be _____.

- ☒ hypotonic
- ☐ The solute concentration in an animal cell does not matter because animal cells use aquaporins to regulate water flow.
- ☐ They are both isotonic because they have the same amount of solvent.
- ☐ hypertonic

Question 3

1 pts

An animal SimCell has a concentration of 5 units of solute per 1 unit of solvent. This animal SimCell is then put into a solution that has a concentration of 2 units of solute per 1 unit of solvent. In this example what will most likely happen to the animal SimCell?

- ☐ Nothing, the cell will regulate its water intake and output using proteins in the cell membrane.
- ☐ The cell will have no net movement of water between itself and the solution surrounding it.
- ☒ The cell will absorb water, potentially causing it to burst and die.
- ☐ The cell will lose water and shrivel up.

Question 4

1 pts

Which of the following is NOT a factor that might affect osmosis?

- ☐ concentration gradient
- ☒ activation energy required to trigger osmosis within the cell.
- ☐ temperature

- ☐ number of aquaporins in the cell membrane.

Question 5

1 pts

A SimCell with a water-permeable membrane that contains: 250 dextrose molecules, 25 glucose molecules, 175 hemoglobin molecules, and 1800 water molecules.

This SimCell is placed in an extracellular fluid that is 2 parts solute to 10 parts water.

Which of the following should happen?

- ☐ There will be no movement of water molecules across the membrane.
- ☒ more water molecules will flow from the extracellular fluid into the SimCell than from the SimCell into the extracellular fluid
- ☐ Water molecules will move back and forth equally across the membrane.

- ☐ More water molecules will flow from the SimCell into the extracellular fluid than from the extracellular fluid into the SimCell.

Saving...

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